



1    **Q     WHAT ISSUES WILL YOU ADDRESS IN YOUR TESTIMONY IN THIS**  
2    **PROCEEDING?**

3    A     I will address the cost allocation and rate design proposed by Staff in this proceeding.  
4           Specifically, I will discuss certain important problems with the cost of service study,  
5           the use of that study to allocate costs among classes and the impacts on large  
6           industrial customers that result from Staff's proposed rates. I will also suggest a  
7           billing change that will result in an improvement in cost-based billings to large  
8           customers.

9    **Q     PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

10   A     My recommendations are summarized as follows:

- 11           • I believe there are significant concerns with Staff's cost of service study in this  
12           proceeding. These concerns support setting aside Staff's cost of service study in  
13           this case, and adjusting customers' rates by an equal percent change to recover  
14           additional revenue found appropriate by the Commission.
- 15           • If the Commission relies on Staff's cost of service study, its proposed rates should  
16           not be approved. Staff's proposed rate structures will pose an onerous burden on  
17           industrial customers during a time of severe economic difficulty when there is a  
18           need to retain industrial facilities in the state of Wisconsin. Staff's proposed rates  
19           will result in nearly twice the system average increase imposed on industrial  
20           customers which is bad policy at a particularly bad point in time. If the Staff's cost  
21           of service study is used in this case, which I recommend it not be, then a  
22           moderation of impact on customers should be implemented, and no rate class  
23           (including the industrial rate class) should be increased by more than 110% of the  
24           system average increase. This is comparable to the rate spread approved for  
25           MWW in Docket 3720-WR-104, in February 2002, and similar to the meaningful  
26           rate mitigation spread approved in MWW's last rate case, Docket 3720-WR-106,  
27           in June 2007.
- 28           • The Commission should investigate consolidated billing for large industrial  
29           customers that have several large meter accounts with MWW served off the same  
30           distribution main. The effect of having multiple accounts serving a single facility  
31           from the same distribution main is that the customer pays far more than its fair  
32           share of the distribution-related cost for service from MWW.

1 **Cost of Service Study**

2 **Q PLEASE DESCRIBE IN GENERAL TERMS THE COST OF SERVICE STUDY**  
3 **PROVIDED BY STAFF IN THIS PROCEEDING.**

4 A Staff filed Exhibit 12.2 on April 1, 2010 (PSC Ref. #129346). This Exhibit includes  
5 Staff's cost of service study, proposed revenue allocation and rate design. This cost  
6 study appears to follow the "Base-Extra Capacity" method used by Staff in the 2007  
7 MWW proceeding, Docket 3720-WR-106. The Staff's cost of service witness in that  
8 case was Mr. Vishwa Kashyap.

9 **Q PLEASE EXPLAIN THE "BASE-EXTRA CAPACITY" METHOD OF CONDUCTING**  
10 **COST STUDIES.**

11 A Base-extra capacity methodology is recognized by the American Water Works  
12 Association (AWWA) in its Water Rates Manual (Principles of Water Rates, Fees, and  
13 Charges, AWWA M1, Fifth Edition 2000). The base-extra capacity method is a  
14 recognized method for allocating the cost of providing water service to customer  
15 classes in proportion to the classes' use of commodity, facilities and services. The  
16 base-extra capacity method is generally accepted and is a sound method for  
17 allocating the cost of water service.

18 **Q ARE YOU TAKING EXCEPTION TO STAFF'S USE OF THE BASE-EXTRA**  
19 **CAPACITY METHOD IN THIS CASE?**

20 A No. As Mr. Kashyap noted in the 2007 proceeding, this method has been used as a  
21 basis for rates in the prior seven cases of MWW and is in general use for all water  
22 utilities in Wisconsin. In addition, it is one of two methods suggested in the AWWA  
23 Water Rates Manual.

1    **Q     WHAT ARE THE PROBLEMS YOU MENTIONED ABOVE CONCERNING STAFF'S**  
2    **COST OF SERVICE STUDY?**

3    A     There are three types of problems: the classification of costs, the failure to  
4         differentiate between sizes of distribution main costs used to serve customers, and  
5         the lack of proper data from MWW.

## 6    **Classification of Costs**

7    **Q     WHAT ARE THE PROBLEMS WITH THE CLASSIFICATION OF COSTS?**

8    A     In Staff's cost of service study, Schedule 5 allocates costs between base costs, extra  
9         capacity, customer costs, and fire protection. The problem concerns Account  
10        No. 343, Transmission Mains. In allocating this cost between base and extra  
11        capacity, Staff used only a max day extra capacity demand allocator. Staff failed to  
12        allocate any portion of transmission mains cost to the max hour component of extra  
13        capacity. As a result, Staff's cost of service study classifies far too much transmission  
14        main cost to the base component, and not enough cost to extra capacity.

15   **Q     WHAT ARE BASE COSTS?**

16   A     Base costs are costs that tend to vary with the quantity of water used plus the capital  
17         costs and associated operating expenses under average load conditions (i.e., the  
18         costs associated with a constant level of use of the system).

19   **Q     WHAT ARE EXTRA CAPACITY COSTS?**

20   A     Extra capacity costs are costs associated with meeting customer requirements  
21         involving a rate of use in excess of the costs required for meeting average load  
22         conditions.

1    **Q     WHAT DO THE TERMS MAX DAY AND MAX HOUR CAPACITY MEAN?**

2    A     Extra capacity costs are commonly subdivided into costs necessary to meet the extra  
3           demands on the system's maximum day and the costs necessary to meet the extra  
4           demands during the system's peak hour. The former is commonly referred to as  
5           "max day" extra capacity and the latter as "max hour" extra capacity.

6    **Q     WHY IS IT APPROPRIATE TO ALLOCATE TRANSMISSION MAINS COSTS TO**  
7           **BASE AND EXTRA CAPACITY, INCLUDING MAX DAY AND MAX HOUR**  
8           **CATEGORIES?**

9    A     Transmission mains are designed to meet average flow conditions and peak  
10          demands on the system. Because they are designed for base and peak demands,  
11          transmission mains costs should be allocated based on customers' contribution to the  
12          system base, and peak demand which occurs at the max hour demand. By not  
13          allocating any transmission costs to the max hour demand, the full peak demand  
14          capacity components of transmission costs are not equitably allocated between the  
15          MWW customers that contribute to the peak max hour demands on the system.

16   **Q     HOW WOULD ALLOCATION OF TRANSMISSION MAINS COSTS IN THIS WAY**  
17          **IMPACT COSTS FOR INDUSTRIAL CUSTOMERS?**

18   A     Allocation of transmission mains costs between customer classifications based on  
19          their base and extra capacity demands on the system is necessary to properly assign  
20          this cost between customers in proportion to how they create demands on the  
21          system. By excluding full recognition of extra capacity cost included in the design  
22          and operation of the transmission cost component, the peak hour cost associated  
23          with transmission mains are shifted to base volume allocations. This creates an

1 unreasonable increase in the allocation of these max hour transmission-related costs  
2 to higher load factor customers such as urban industrial customers. This happens  
3 because industrial customers are higher load factor customers. Allocating extra  
4 demand charges in the base volume allocation method over-allocates these costs to  
5 the customers that use the most volume in proportion to their peak demands. This  
6 results in higher load factor customers receiving a disproportionately high allocation  
7 of transmission costs, and lower load factor customers receiving a disproportionately  
8 low allocation of these transmission costs.

9 **Q HAVE YOU COMPARED THE DEMAND RATIOS USED BY STAFF IN THIS CASE**  
10 **WITH THOSE USED IN THE LAST CASE?**

11 A Yes. The changes since the last case in two of the more important of these ratios are  
12 dramatic. Specifically, the split between base and max day extra capacity (used to  
13 allocate transmission mains) was 52% base and 48% max day extra capacity in the  
14 prior case. In this case, the base ratio has increased to 71.4% while the max day  
15 extra capacity ratio has decreased to 28.6%.

16 Similarly, the split between base and max hour extra capacity (used to  
17 allocate distribution mains) used in the last case was 35% base and 65% max hour  
18 extra capacity. In this case, the base ratio has increased to 58.8% while the max  
19 hour extra capacity ratio has decreased to 41.2%.

20 No explanation has been provided for this wide discrepancy that has occurred  
21 in the absence of any new data being provided. This greater weighting of base  
22 capacity has the effect of exacerbating the Staff's failure to properly allocate costs  
23 between lower and higher load factor customers.

1    **Q     ARE THERE ANY OTHER CONCERNS REGARDING THE CLASSIFICATION OF**  
2    **COSTS?**

3    A     Yes. Account No. 623 “Fuel or Power Purchased for Production” is \$5 million for the  
4         test year, which represents approximately 10% of total Operation and Maintenance  
5         Expenses. Staff’s cost of service study classifies this account entirely as “Base  
6         Costs,” which is allocated on usage. None of these costs are classified as either max  
7         day or max hour extra capacity costs.

8    **Q     HOW ARE THESE COSTS INCURRED?**

9    A     These costs are billed to MWW by Wisconsin Electric (WE).

10   **Q     DO THE CHARGES FROM WE INCLUDE DEMAND CHARGES?**

11   A     Yes. WE bills MWW under its commercial rates which include both demand and  
12         energy charges.

13   **Q     HOW SHOULD THESE “FUEL OR POWER PURCHASED FOR PRODUCTION”**  
14         **COSTS BE CLASSIFIED FOR PURPOSES OF THE BASE AND EXTRA DEMAND**  
15         **COST OF SERVICE STUDY?**

16   A     The energy charges should be classified as base costs, and the demand charges  
17         should be classified as max day or max hour extra capacity costs.

1    **Q     HOW WOULD USE OF THIS CLASSIFICATION IMPACT THE COST**  
2           **ALLOCATION TO INDUSTRIAL CUSTOMERS IN THE COST OF SERVICE**  
3           **STUDY?**

4    **A     Since the customer and demand allocation factors for industrial service are much**  
5           **lower than the base usage factor, it would reduce the allocation to industrial**  
6           **customers.**

7    **Distribution Mains Size Adjustment**

8    **Q     PLEASE DESCRIBE YOUR CONCERN WITH STAFF'S ALLOCATION OF**  
9           **DISTRIBUTION COSTS.**

10   **A     Staff separates total main costs into transmission main costs (main diameter 12" and**  
11           **larger) and distribution main costs (main diameter smaller than 12"). Staff properly**  
12           **recognizes that certain wholesale customers should not be allocated a portion of**  
13           **MWW's distribution main cost because those costs are not incurred to provide water**  
14           **service to those wholesale customers.**

15           The concern I have is that Staff did not recognize that there are a significant  
16           amount of distribution costs that are allocated to large customers in its study, but the  
17           small distribution mains are not used to serve those large customers.

18           For example, industrial customers served on meter sizes of 8" and larger can  
19           only be served by 8" and larger distribution mains. As such, MWW's distribution  
20           costs, supporting investments and operation and maintenance costs for mains  
21           smaller than 8" are not costs incurred to provide service to large industrial customers  
22           served on 8" meters.



**Q WHY DO YOU BELIEVE THAT MWW'S INVESTMENTS IN SMALLER DISTRIBUTION MAINS CANNOT BE USED TO SERVE LARGE INDUSTRIAL CUSTOMERS?**

A MWW maintains a water service piping specification that states minimum sizes for mains serving different sizes of meter bases. In the document, "City of Milwaukee Department of Public Works, Milwaukee Water Works, Water Service Piping Specification, Revised 2002," MWW specifies its meters and pipe sizes that will deliver the estimated flow of water to its customers. MWW's manual specifies that meter sizes of 8" and larger require piping of 8" or larger. The piping requirement ensures that the distribution infrastructure can provide the water flow rate demanded by the customer. A pipe that is too small will not be able to deliver the customer's water flow demands. As such, it would be inconsistent with MWW's piping specifications to use mains smaller than 8" to serve a customer that has a meter of 8" or larger.

**Q HOW SIGNIFICANT ARE SMALL DISTRIBUTION PIPES FOR MWW'S TOTAL DISTRIBUTION COST?**

A Very significant. Exhibit 13.1, Schedule 1, shows a breakout of MWW's total transmission and distribution main investment. On this schedule, I separate MWW's transmission mains (pipe diameter of 16" or larger) from distribution mains (pipe diameter smaller than 16"). MWW's distribution mains make up approximately 82% of its total main footage.

For the distribution mains, approximately 33% of the total distribution main footage is for pipe with diameters 6" and smaller, and 67% are for distribution mains of 8" up to 16". This main size and length of pipe analysis would support an allocation of 33% of MWW's total distribution cost to only small customers that take

1 service from MWW's smaller distribution mains. The remaining distribution costs,  
2 67%, should be allocated to all distribution customers based on Staff's base and extra  
3 capacity allocation factors.

4 It is important to note that all customers, both small and large, use the large  
5 distribution system. Small customers can and are served from 8" distribution mains,  
6 but a large customer cannot be served from a main smaller than 8". As such, large  
7 distribution main costs should be spread across all customers, but small distribution  
8 main costs should be allocated only to smaller customers (i.e., meter sizes of 6" and  
9 less).

10 **Q ARE YOU AWARE OF OTHER JURISDICTIONS THAT SEPARATE THE COSTS**  
11 **OF SMALL AND LARGE DISTRIBUTION MAINS IN WATER COST OF SERVICE**  
12 **STUDIES?**

13 **A** Yes. This practice is common for both water utilities and public service commission  
14 staffs in Illinois, Indiana, Missouri, and possibly others. This practice more accurately  
15 allocates the distribution main costs between customers in relationship to how those  
16 customers cause the utility to incur distribution-related costs. Therefore, I believe it is  
17 becoming an industry standard practice in developing water utility cost of service  
18 studies. Exhibit 13.1, Schedule 2, identifies the utility and testimony supporting the  
19 separation of distribution costs between small mains and large mains when allocating  
20 main costs between customer classes.

1 **Demand Factor Data Limitation**

2 **Q WHAT ARE THE PROBLEMS RELATED TO DEMAND FACTOR DATA?**

3 A Staff's January 25, 2010 Data Request entitled "data request regarding customer  
4 class demand ratios" requested updated information from MWW in order to estimate  
5 current extra capacity demand factors (i.e., max day and max hour allocation factors).  
6 However, MWW indicated that it did not have this data, and had not collected it since  
7 2005 (PSC Ref. #129712). As a result, Staff did not have the data available to  
8 update the customer class demand ratios it used on its Schedule 9 in order to  
9 develop allocation factors of base cost, extra capacity max day demand, and extra  
10 capacity max hour demand.

11 **Q ARE THE EXTRA CAPACITY DEMAND RATIOS THAT STAFF USED IN**  
12 **SCHEDULE 9 IN ITS CURRENT COST OF SERVICE STUDY COMPARABLE TO**  
13 **THE EXTRA CAPACITY DEMAND RATIOS STAFF RELIED ON IN PREVIOUS**  
14 **RATE CASES FOR MWW?**

15 A No. Indeed, there is a significant discrepancy in the extra capacity max hour demand  
16 ratios used by Staff in this case relative to the max hour demand ratios used by Staff  
17 in the last rate case. This is shown on Exhibit 13.1, Schedule 3. As shown on this  
18 schedule, Staff's extra capacity max hour demand ratios for all residential customers  
19 is much smaller in this case than it was in the last case. This suggests an unrealistic  
20 increase in the load factor for residential customers since MWW's last rate case.  
21 Staff has provided no justification for this significant change in the load factor  
22 characteristics for residential customers. If the load factor assumptions are not  
23 accurately characterized, the Staff's cost of service study will not properly assign  
24 costs between rate classes.

1 **Revenue Allocation and Rate Design**

2 **Q HAVE YOU REVIEWED STAFF'S REVENUE ALLOCATION AND RATE DESIGN**  
3 **PROPOSAL?**

4 A Yes. I have summarized Staff's proposed revenue allocation on Exhibit 13.1,  
5 Schedule 4. As this schedule shows, the proposed percentage increases range from  
6 a low of 26.6% for commercial service to a high of 38.9% for industrial service.  
7 However, as shown on Staff Exhibit 12.2, Schedule 14, page 1 of 3, the increases for  
8 the largest urban industrial customers would be approximately 50% under Staff's  
9 proposal.

10 **Q IS THIS PROPOSED ALLOCATION OF THE INCREASE REASONABLE?**

11 A No. This proposal would result in a disproportionate share of the requested revenues  
12 being allocated to urban industrial customers and will result in rate shock for those  
13 customers. Moreover, the timing of such a draconian increase couldn't be worse.

14 **Q IS THERE ANY BASIS FOR SUCH LARGE INCREASES TO INDUSTRIAL**  
15 **CUSTOMERS?**

16 A Staff's cost of service study does suggest that a strict application of the cost study  
17 would result in an approximate 50% increase to industrial customers. However, as  
18 discussed above, because of the lack of sound data and other problems with the  
19 study such as the classification of costs and lack of separation by main size, it is not a  
20 reasonable basis for revenue allocation in this case.

21 **Q IF THE COMMISSION WERE TO IGNORE THOSE PROBLEMS WITH THE COST**  
22 **STUDY, COULD STAFF'S PROPOSAL BE CONSIDERED REASONABLE?**

1 A No. In a case where the average increase is 28.5%, it is not reasonable to impose a  
2 50% increase on major customers under any circumstances. While a 28.5% increase  
3 is difficult for customers to deal with, it can at least be understood by customers who  
4 are aware of cost increases that a water utility faces. An additional increase of more  
5 than 20%, however, cannot be expected, budgeted or tolerated by large customers  
6 that operate in a competitive environment. The response will likely be to reduce or  
7 shift output to other locations that do not face such large increases.

8 In addition to the level of the increase, the very fact that nothing is done to  
9 moderate a 50% increase faced by some customers amounts to an announcement  
10 that rate volatility is not a concern of the Commission. This Commission has an  
11 excellent record of avoiding such volatility in the past and must address that issue in  
12 this case to reassure customers that this remains a major concern.

13 **Q HAS STAFF RECOGNIZED THE IMPORTANCE OF RATE MODERATION IN THE**  
14 **PAST?**

15 A Yes. In his direct testimony in the prior MWW case at page 3, Mr. Prochaska stated:

16 ". . . I am recommending rates that move substantially in the direction  
17 of cost of service. I also recommend that any further movement  
18 necessary in that direction be made in subsequent rate proceedings.  
19 In moving toward the cost of service in recommended rates, I have  
20 done some tempering of the rate increases to the customer classes  
21 within each class of service that, according to the cost of service study,  
22 should receive the largest percentage increases. The resulting  
23 revenue difference is recovered through rates to the remaining  
24 customer classes."

25 **Q IN TERMS OF MAGNITUDE OF PERCENTAGE INCREASES, HOW MUCH**  
26 **TEMPERING DID MR. PROCHASKA DO IN THAT CASE?**

27 A Quite a bit. He describes this at page 4 of his testimony in that case. While the  
28 public authority class was shown to need a 13.6% increase under cost of service, he

1 proposed a 6.4% increase for that class which was only slightly greater than the  
2 average increase of 5.6%. In other words, he proposed an increase of only about  
3 one-half the cost of service increase.

4 **Q ARE THERE ANY FACTS ABOUT THIS CASE THAT WOULD SUPPORT SIMILAR**  
5 **MODERATION?**

6 A There are very important reasons in this case to support rate moderation.  
7 Specifically, the U.S. economy is only beginning to recover from a very harmful  
8 recession. Wisconsin did not escape damage to its industrial base from the  
9 recession. A 50% increase in water rates for industrial customers of MWW would be  
10 a major set back in what was hoped to be a recovery. Moreover, at this time,  
11 Wisconsin needs to find ways to encourage industry, not to set up barriers to  
12 economic development in the form of utility rate volatility.

13 **Q ARE COMPETITIVE UTILITY RATES IMPORTANT TO INDUSTRIAL**  
14 **CUSTOMERS?**

15 A Yes. Based on my experience working with large industrial companies, it is my  
16 understanding and experience that competitively priced utility service and consistent  
17 regulatory practices are important considerations in industrial companies making site  
18 location and expansion investment decisions.

19 **Recommendations: Cost of Service and Revenue Allocation**

20 **Q DO YOU HAVE ANY SPECIFIC CONCLUSIONS AND RECOMMENDATIONS**  
21 **CONCERNING COST OF SERVICE AND REVENUE ALLOCATION BASED ON**

**YOUR ANALYSIS OF THE COST OF SERVICE AND RATE DESIGN ISSUES IN THIS CASE?**

A Yes. First, I appreciate Staff's attempt to provide a cost of service study and move rates toward costs in this case. However, as discussed above, it does not appear that Staff was able to provide a useable cost of service study for this case due, in large part, to data limitations. Therefore, my first recommendation is to require MWW to collect the data necessary to develop reasonable allocation factors and distinguish between main sizes used by different classes for a cost of service study in its next proceeding.

Second, allocate any increase granted in this case by applying an equal percentage increase to all classes. In addition, in order to avoid unreasonably large increases to individual customers, each rate block charge should be adjusted equally by the same percentage increase.

Finally, if the Commission does not share my concerns regarding the cost of service study, the increase to any class or major customers within a class should be limited to 110% of the system average. This level is reasonable in light of the very large overall percentage increase in this case, and consistent with the rate spread applied in previous MWW rate cases.

**ARE YOU AWARE THAT STAFF FILED REVISIONS TO ITS COST OF SERVICE STUDY AND RATE DESIGN PROPOSAL EARLIER TODAY?**

A Yes, but I have not had a chance to study it in any detail prior to filing testimony. My direct testimony is based on Staff's April 1 cost of service study and rate design proposal, and I reserve the right to comment on Staff's recent revisions in rebuttal testimony.

1 **Consolidated Billing**

2 **Q WHAT IS BILL CONSOLIDATION?**

3 A Bill consolidation would allow certain large customers that have multiple metered  
4 accounts at a single location to consolidate their volumetric usage before it is applied  
5 to the applicable MWW tariff rate.

6 **Q WHY IS CONSOLIDATED BILLING FOR CERTAIN LARGE FACILITIES WITH**  
7 **MULTIPLE ACCOUNTS AT A SINGLE LOCATION COST JUSTIFIED?**

8 A Consolidating the volume use for a single facility served by multiple accounts will  
9 allow for that facility to pay for MWW's transmission, distribution and production  
10 facilities that serve that facility, and will result in prices that are based on the  
11 economies of scale that reflect the facility's total usage. Consolidating the volume  
12 billing would more accurately reflect that facility's combined base and extra capacity  
13 demands on MWW and support reasonable cost allocation and rate design.

14 Without consolidated billing, the customer will pay for a portion of utility costs  
15 recovered in the initial volume blocks more than once. As a result, the large customer  
16 does not benefit from the economies of scale its load creates for MWW.

17 **Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

18 A Yes, it does.



**Qualifications of Michael Gorman**

1    **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A     Michael Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,  
3           Chesterfield, MO 63017.

4    **Q     PLEASE STATE YOUR OCCUPATION.**

5    A     I am a consultant in the field of public utility regulation and a Managing Principal with  
6           Brubaker & Associates, Inc., energy, economic and regulatory consultants.

7    **Q     PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK  
8           EXPERIENCE.**

9    A     In 1983 I received a Bachelors of Science Degree in Electrical Engineering from  
10          Southern Illinois University, and in 1986, I received a Masters Degree in Business  
11          Administration with a concentration in Finance from the University of Illinois at  
12          Springfield. I have also completed several graduate level economics courses.

13                In August of 1983, I accepted an analyst position with the Illinois Commerce  
14          Commission (ICC). In this position, I performed a variety of analyses for both formal  
15          and informal investigations before the ICC, including: marginal cost of energy, central  
16          dispatch, avoided cost of energy, annual system production costs, and working  
17          capital. In October of 1986, I was promoted to the position of Senior Analyst. In this  
18          position, I assumed the additional responsibilities of technical leader on projects, and  
19          my areas of responsibility were expanded to include utility financial modeling and  
20          financial analyses.

21                In 1987, I was promoted to Director of the Financial Analysis Department. In  
22          this position, I was responsible for all financial analyses conducted by the staff.

1 Among other things, I conducted analyses and sponsored testimony before the ICC  
2 on rate of return, financial integrity, financial modeling and related issues. I also  
3 supervised the development of all Staff analyses and testimony on these same  
4 issues. In addition, I supervised the Staff's review and recommendations to the  
5 Commission concerning utility plans to issue debt and equity securities.

6 In August of 1989, I accepted a position with Merrill-Lynch as a financial  
7 consultant. After receiving all required securities licenses, I worked with individual  
8 investors and small businesses in evaluating and selecting investments suitable to  
9 their requirements.

10 In September of 1990, I accepted a position with Drazen-Brubaker &  
11 Associates, Inc. In April 1995 the firm of Brubaker & Associates, Inc. (BAI) was  
12 formed. It includes most of the former DBA principals and staff. Since 1990, I have  
13 performed various analyses and sponsored testimony on cost of capital, cost/benefits  
14 of utility mergers and acquisitions, utility reorganizations, level of operating expenses  
15 and rate base, cost of service studies, and analyses relating to industrial jobs and  
16 economic development. I also participated in a study used to revise the financial  
17 policy for the municipal utility in Kansas City, Kansas.

18 At BAI, I also have extensive experience working with large energy users to  
19 distribute and critically evaluate responses to requests for proposals for electric,  
20 steam, and gas energy supply from competitive energy suppliers. These analyses  
21 include the evaluation of gas supply and delivery charges, cogeneration and/or  
22 combined cycle unit feasibility studies, and the evaluation of third-party asset/supply  
23 management agreements. I have also analyzed commodity pricing indices and  
24 forward pricing methods for third party supply agreements, and have also conducted  
25 regional electric market price forecasts.

1 In addition to our main office in St. Louis, the firm also has branch offices in  
2 Phoenix, Arizona and Corpus Christi, Texas.

3 **Q PLEASE EXPLAIN YOUR EXPERIENCE IN WATER RATE CASES.**

4 A I have been appearing in water rate proceedings for well over ten years addressing  
5 revenue requirements, including rate base, capital expenditure, cost of capital, and  
6 financial integrity. I have also testified to class cost of service studies and rate  
7 design. I have offered testimony in water rate proceedings in Delaware, Illinois,  
8 Indiana, Missouri, and Tennessee.

9 **Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?**

10 A Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of  
11 service and other issues before the Federal Energy Regulatory Commission and  
12 numerous state regulatory commissions including: Arkansas, Arizona, California,  
13 Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas,  
14 Louisiana, Michigan, Missouri, Montana, New Jersey, New Mexico, New York, North  
15 Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Vermont,  
16 Virginia, Washington, West Virginia, Wisconsin, Wyoming, and before the provincial  
17 regulatory boards in Alberta and Nova Scotia, Canada. I have also sponsored  
18 testimony before the Board of Public Utilities in Kansas City, Kansas; presented rate  
19 setting position reports to the regulatory board of the municipal utility in Austin, Texas,  
20 and Salt River Project, Arizona, on behalf of industrial customers; and negotiated rate  
21 disputes for industrial customers of the Municipal Electric Authority of Georgia in the  
22 LaGrange, Georgia district.

23 **Q PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR**  
24 **ORGANIZATIONS TO WHICH YOU BELONG.**

1     A     I earned the designation of Chartered Financial Analyst (CFA) from the CFA Institute.  
2           The CFA charter was awarded after successfully completing three examinations  
3           which covered the subject areas of financial accounting, economics, fixed income and  
4           equity valuation and professional and ethical conduct. I am a member of the CFA  
5           Institute's Financial Analyst Society.

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